VILLAGE 21 WATER DISTRICT (PWS 2250066)
SOURCE WATER ASSESSMENT FINAL REPORT

February 25, 2003

State of Idaho
Department of Environmental Quality

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. This assessment is based on a land use inventory of the designated source water assessment area and sensitivity factors associated with the well and aquifer characteristics.

This report, *Source Water Assessment for Village 21 Water District, Clearwater County, Idaho*, describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The Village 21 Water District drinking water system consists of one active ground water well. The system was constructed in 1970 and currently serves approximately 31 people through 14 connections.

Final susceptibility scores are derived from equally weighing system construction scores, hydrologic sensitivity scores (wells only), and potential contaminant/land use scores. Therefore, a low rating in one or two categories coupled with a higher rating in other categories results in a final rating of low, moderate, or high susceptibility. With the potential contaminants associated with most urban and heavily agricultural areas, the best score a well can get is moderate. Potential Contaminants/Land Uses are divided into four categories, inorganic contaminants (IOCs, i.e. nitrates, arsenic), volatile organic contaminants (VOCs, i.e. petroleum products), synthetic organic contaminants (SOCs, i.e. pesticides), and microbial contaminants (i.e. bacteria). As different wells can be subject to various contamination settings, separate scores are given for each type of contaminant.

In terms of total susceptibility, the Solberg Well rated moderate for IOCs, VOCs, SOCs, and microbials. System construction rated high and hydrologic sensitivity rated moderate. Land use rated moderate for IOCs, VOCs, SOCs, and low for microbials.

No VOCs or SOCs have ever been detected in the water system. The IOCs sodium, barium, nitrate, and fluoride have been detected in tested water, however, concentrations of each have been significantly below their respective maximum contaminant level (MCL). A repeat detection of total coliform has occurred five times in the distribution system (March and September, 1995, June and July, 1997, and October, 1998).

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well or spring sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

For the Village 21 Water District, drinking water protection activities should first focus on correcting any deficiencies outlined in the sanitary survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system's components and its capacity). Specifically, the installation of an approved surface seal and wellhead vent, and the disconnection of all unapproved private wells from the water system. Actions should be taken to keep a 50-foot radius circle clear of all potential contaminants from around the wellhead.

Any contaminant spills within the delineation should be carefully monitored and dealt with. As much of the designated protection areas are outside the direct jurisdiction of the Village 21 Water District, collaboration and partnerships with state and local agencies, and industry groups should be established and are critical to the success of drinking water protection. In addition, the well should maintain sanitary standards regarding wellhead protection.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. For assistance in developing protection strategies please contact the Lewiston Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR VILLAGE 21 WATER DISTRICT, IDAHO COUNTY, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the rankings of this assessment mean.** Maps showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings used to develop the assessment is also included.

Background

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area and sensitivity factors associated with the wells and aquifer characteristics.

Level of Accuracy and Purpose of the Assessment

Since there are over 2,900 public water sources in Idaho, there is limited time and resources to accomplish the assessments. All assessments must be completed by May of 2003. An in-depth, site-specific investigation of each significant potential source of contamination is not possible. **Therefore, this assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (DEQ) recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The local community, based on its own needs and limitations, should determine the decision as to the amount and types of information necessary to develop a drinking water protection program. Wellhead or drinking water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The Village 21 Water District drinking water system consists of one active groundwater well. The system was constructed in 1970 and currently serves approximately 31 people through 14 connections.

No VOCs or SOCs have ever been detected in the water system. The IOCs sodium, barium, nitrate, and fluoride have been detected in tested water, however, concentrations of each have been significantly below their respective MCL. A repeat detection of total coliform has occurred five times in the distribution system (March and September, 1995, June and July, 1997, and October, 1998).

Defining the Zones of Contribution – Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time-of-travel (TOT) zones (zones indicating the number of years necessary for a particle of water to reach a well) for water in the aquifer. DEQ contracted with the University of Idaho to perform the delineations using a refined computer model approved by the EPA in determining the 3-year (Zone 1B), 6-year (Zone 2), and 10-year (Zone 3) TOT for water associated with the aquifer of the Clearwater Uplands in the vicinity of the Village 21 Water District wells. The computer model used site specific data, assimilated by the University of Idaho from a variety of sources including operator input, local area well logs, and hydrogeologic reports (detailed below).

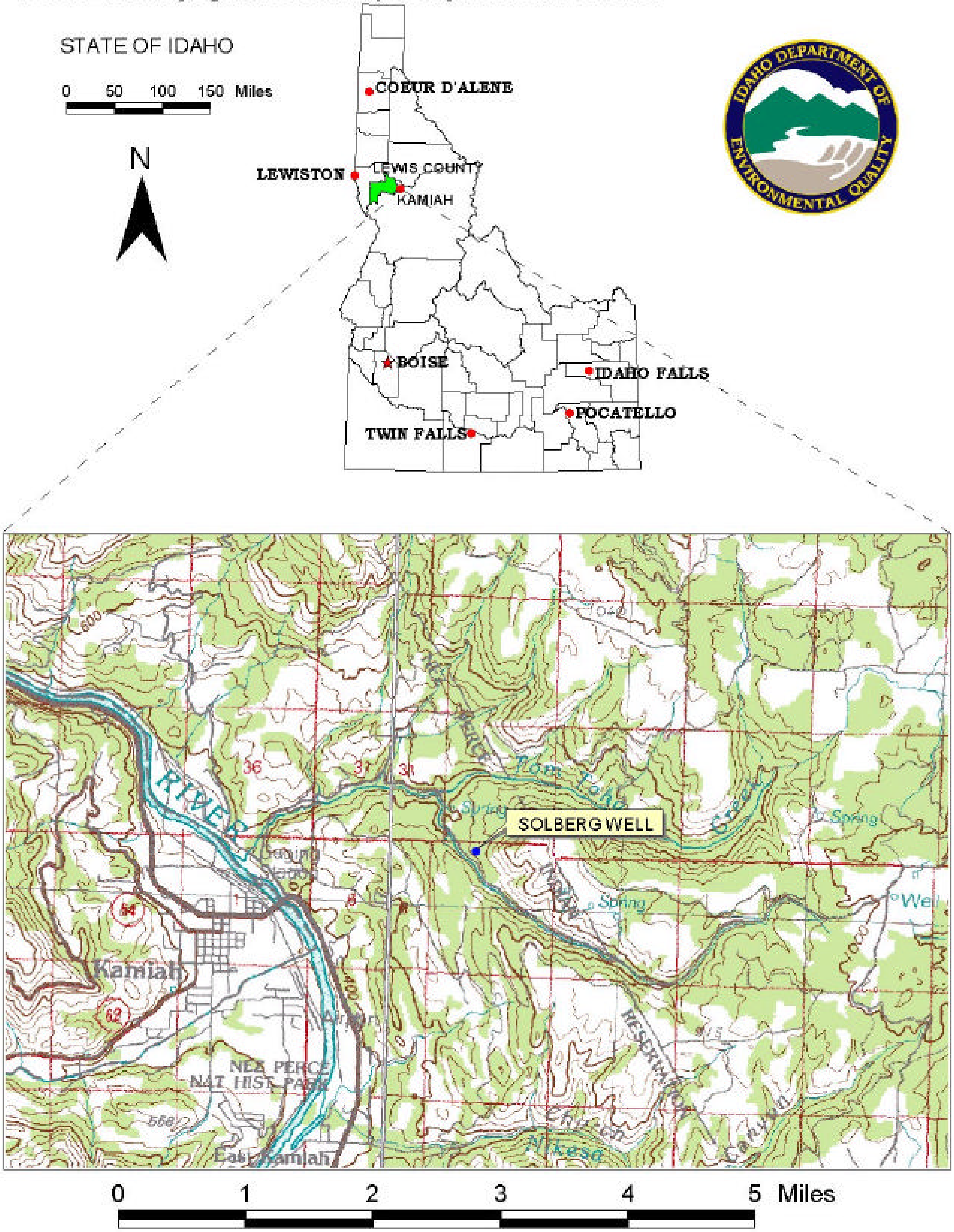
Hydrogeologic Setting

The conceptual hydrogeologic model for the Village 21 Subdivision source well northeast of Kamiah, Idaho is based on interpretation of available well logs and a published geologic map. The source well log indicates water is derived from the crystalline aquifer of the Idaho Batholith. Water is also derived from the basalt but is not believed to be significant. Bedrock geology is based on the geologic maps of the Hamilton quadrangle and Pullman quadrangle at a scale of 1:250,000 (Rember and Bennett, 1979). Geology of the area is quite complex with northwest-southeast trending faults to the east of the source near Kamiah. Basalt of the Columbia River Basalt Group surrounds batholith outcroppings.

Figure 1 shows the location of the source. The ground elevation is approximately 1830 feet above mean sea level (msl) at the source well. Discharge from the source well is approximately 120 gpm. For comparison, wells located in granite aquifers of the Moscow-Pullman Basin produce less than 100 gpm (Osiensky et al., 2000). Little information is known about the hydrogeology of the area.

Ground water occurrence in crystalline rock aquifers is influenced by weathering at shallow depths and fracturing at deeper depths (Kaal, 1978). Typically, ground water occurs under perched and water table conditions in surficial sediments and weathered bedrock, whereas weathered and fractured granite at deeper depths will contain ground water under confined conditions (Kaal, 1978). In unconfined quifers, water flow follows topography and is generally less than 10 feet below ground. Water levels in wells tapping the confined crystalline aquifer range from 15 to over 100 feet deep and contouring of static water levels indicates steep and highly irregular gradients (Kaal, 1978).

FIGURE 1. Geographic Location of Village 21 Water District



Neighboring private wells were used for test points in the WhAEM simulations. Information on test points was obtained from a search of the Idaho Department of Water Resources database available on the internet. The locations of the test points are limited to information supplied on well logs, typically the quarter-quarter section (0.0625 mile^2). Therefore, the accuracy of the test point elevation and the static water elevation is dependent upon the accuracy of the driller's log and the topographic relief in the quarter-quarter section.

The capture zones delineated herein are based on limited data and must be taken as best estimates. If more data become available in the future the delineation should be adjusted based on additional modeling incorporating the new data.

The delineated source water assessment areas for the Solberg Well can best be described as a circle approximately 1.5 miles in diameter (Figure 2). The actual data used by the University of Idaho in determining the source water assessment delineation areas is available from DEQ upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of groundwater contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and from available databases.

Land use within the immediate area and the surrounding area of the Village 21 Water District source is predominantly undeveloped range land or woodland.

It is important to understand that a release may never occur from a potential source of contamination provided they are using best management practices. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, including educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A two-phased contaminant inventory of the study area was conducted in November and December 2002. The first phase involved identifying and documenting potential contaminant sources within the Village 21 Water District source water assessment areas (Figure 2 and Table 1) through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ.

The second, or enhanced, phase of the contaminant inventory involved contacting the operator to identify and add any additional potential sources in the area. No additional potential contaminant sources were identified by the system's operator.

The delineated source water assessment area of the Village 21 Water District well contains one point source, a landfill. In addition both tributaries of Tom Taha Creek, Tom Taha Road, and Beaver Slide Road are non-point sources which intersect the delineation. These sources can contribute leachable contaminants to the aquifer in the event of an accidental spill, release, or flood.

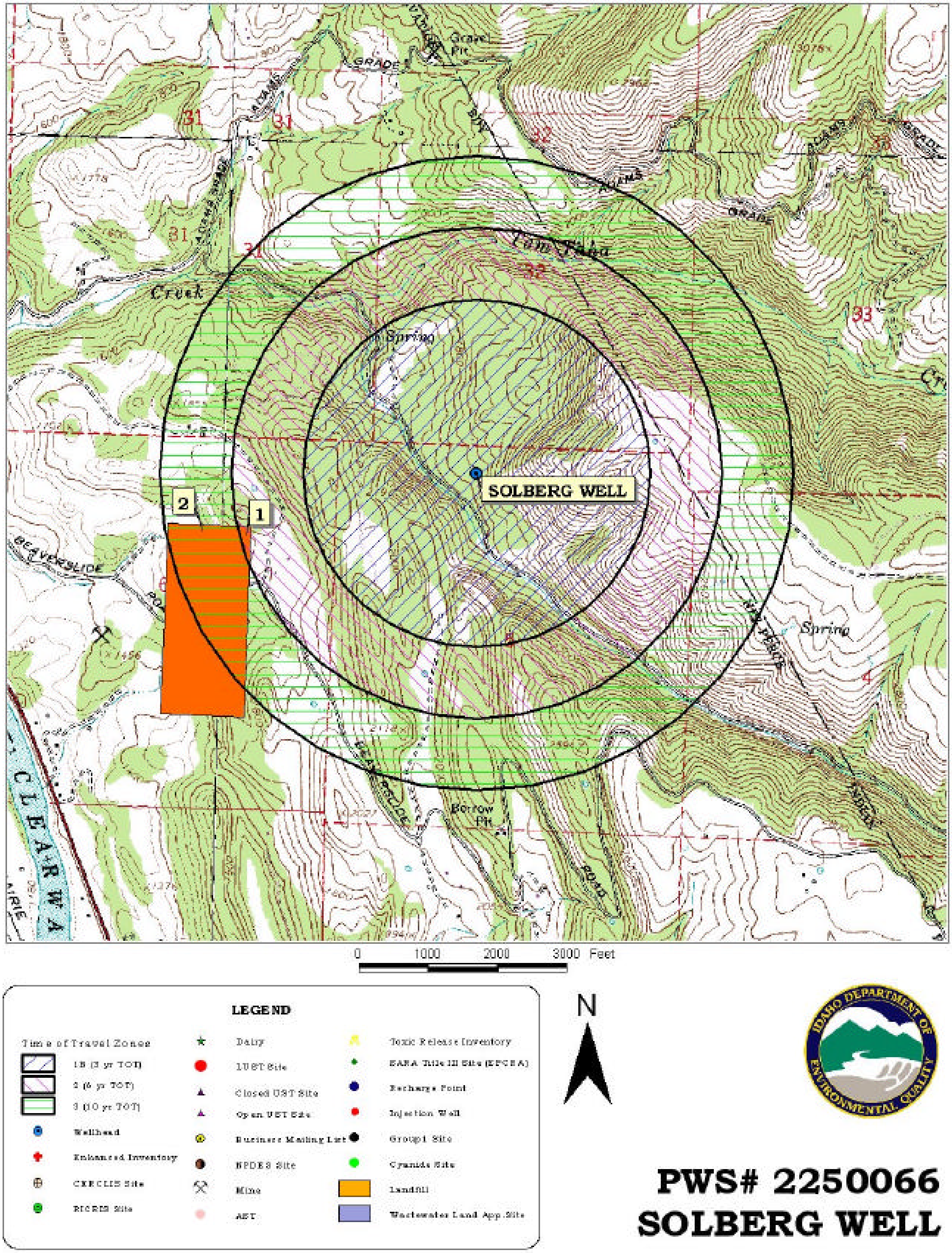
Table 1. Village 21 Water District, Solberg Well, Potential Contaminant/Land Use Inventory.

Site	Description of Source[1]	TOT[2] Zone	Source of Information	Potential Contaminants[3]
1, 2	Landfill	3-6, 6-10 YR	Database Search	IOC, VOC, SOC
	Tom Taha Road	0-3, 3-6, 6-10 YR	GIS Map	IOC, VOC, SOC, Microbial
	Tom Taha Creek Tributaries	0-3, 3-6, 6-10 YR	GIS Map	IOC, VOC, SOC, Microbial
	Beaver Slide Road	3-6, 6-10 YR	GIS Map	IOC, VOC, SOC, Microbial

[2] TOT = time-of-travel (in years) for a potential contaminant to reach the wellhead

[3] IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

FIGURE 2. Village 21 Water District Delineation Map and Potential Contaminant Source Locations



Section 3. Susceptibility Analyses

Each well or spring's susceptibility to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well or spring is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. Appendix A contains the susceptibility analysis worksheet for the system. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

The hydrologic sensitivity of a well is dependent upon four factors: the surface soil composition, the material in the vadose zone (between the land surface and the water table), the depth to first ground water, and the presence of a 50-foot thick fine-grained zone (aquitard) above the producing zone of the well. Slowly draining soils such as silt and clay typically are more protective of ground water than coarse-grained soils such as sand and gravel. Similarly, fine-grained sediments in the subsurface and a water depth of more than 300 feet protect the ground water from contamination. Hydrologic sensitivity is not included as part of a spring's rating.

Hydrologic sensitivity rated moderate for Solberg Well. According to the National Resource Conservation Service (NRCS), the soils within the delineation are moderately to highly drained. The well log illustrated that the vadose zone composition is predominantly broken basalt, the water table is less than 300 feet (94 feet), and an aquitard is not present above the producing zone of the well.

System Construction

Well construction directly affects the ability of the well to protect the aquifer from contaminants. System construction scores are reduced when information shows that potential contaminants will have a more difficult time reaching the intake of the well. Lower scores imply a system is less vulnerable to contamination. For example, if the well casing and annular seal both extend into a low permeability unit, then the possibility of contamination is reduced and the system construction score goes down. If the highest production interval is more than 100 feet below the water table, then the system is considered to have better buffering capacity. If the wellhead and surface seal are maintained to standards, as outlined in sanitary surveys, then contamination down the well bore is less likely. If the well is protected from surface flooding and is outside the 100-year floodplain, then contamination from surface events is reduced. A sanitary survey was conducted in 2000 for the system.

Solberg Well rated high for construction. The well was constructed in 1970 and is 300 feet deep. The well is cased with a 6-inch in diameter casing from the surface to 116 feet below ground surface (bgs), and from 190 feet bgs to 300 feet bgs with 5-inch casing. The upper casing was seated into “solid hard basalt” and the lower perforated casing was placed between “vesicular basalt” and “decomposing granite.” The well appears to be an open hole between 116 feet bgs and 190 feet bgs through a solid basalt section. A pudding clay annular seal was placed to 116 feet bgs into the “solid hard basalt.” The rating was derived by the following: The well is located outside of a 100 year floodplain. The score was increased because the well’s water begins to be collected only 22 feet below the water table of 94 feet bgs, and not all the casings are seated into low permeability units (specifically, the bottom casing). In addition, because the casings are too thin, a wellhead vent is missing, and no surface seal has been placed, the wellhead and surface seal are not considered to be either maintained or meeting current construction standards.

Though the wells may have been in compliance with standards when they were completed, current PWS well construction standards are more stringent. The Idaho Department of Water Resources *Well Construction Standards Rules* (1993) require all PWSs to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works* (1997) during construction. These standards include provisions for well screens, pumping tests, and casing thicknesses to name a few. Table 1 of the *Recommended Standards for Water Works* (1997) lists the required steel casing thickness for various diameter wells. 5-inch and 6-inch casings require a thickness of at least 0.280 inches. As such, the wells were assessed an additional point in the system construction rating.

Potential Contaminant Source and Land Use

The Solberg Well rated moderate for IOCs (i.e. nitrates, arsenic), VOCs (i.e. petroleum products), SOCs (i.e. pesticides), and low for microbials. The number and location of potential contaminant sources, and the minimal amount of agricultural land within the delineation contributed to the land use scores.

Final Susceptibility Ranking

An IOC detection above a drinking water standard MCL, any detection of a VOC or SOC, or a detection of total coliform bacteria or fecal coliform bacteria at the wellhead will automatically give a high susceptibility rating to a well despite the land use of the area because a pathway for contamination already exists. Hydrologic sensitivity and system construction scores are heavily weighted in the final scores. Having multiple potential contaminant sources in the 0 to 3-year time of travel zone (Zone 1B) and agricultural land contribute greatly to the overall ranking.

Table 2. Summary of Village 21 Water District Susceptibility Evaluation

Well	Susceptibility Scores[1]									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Solberg Well	M	M	M	M	L	H	M	M	M	M

[1]H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility,
IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Susceptibility Summary

The Village 21 Water District drinking water system consists of one active groundwater well. The system was constructed in 1970 and currently serves approximately 31 people through 14 connections.

In terms of total susceptibility, Solberg Well rated moderate for IOCs, VOCs, SOCs, and microbials. System construction rated high and hydrologic sensitivity rated moderate. Land use rated moderate for IOCs, VOCs, SOCs, and low for microbials.

Section 4. Options for Drinking Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For the Village 21 Water District, drinking water protection activities should first focus on correcting any deficiencies outlined in the sanitary survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system’s components and its capacity). Specifically, the installation of an approved surface seal and wellhead vent, and the disconnection of all unapproved private wells from the water system. Actions should be taken to keep a 50-foot radius circle clear of all potential contaminants from around the wellhead.

Any contaminant spills within the delineation should be carefully monitored and dealt with. As much of the designated protection areas are outside the direct jurisdiction of the Village 21 Water District, collaboration and partnerships with state and local agencies, and industry groups should be established and are critical to the success of drinking water protection. In addition, the well should maintain sanitary standards regarding wellhead protection.

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan as the delineation encompasses urban and commercial land uses. Public education topics could include proper lawn and garden care practices, hazardous waste disposal methods, proper care and maintenance of septic systems, and the importance of water conservation to name but a few. There are multiple resources available to help communities implement protection programs, including the Drinking Water Academy of the EPA.

A system must incorporate a variety of strategies in order to develop a comprehensive drinking water protection plan, be they regulatory in nature (i.e. zoning, permitting) or non-regulatory in nature (i.e. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Lewiston Regional Office of the DEQ or the Idaho Rural Water Association.

Assistance

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Lewiston Regional DEQ Office	(208) 799-4370
State DEQ Office	(208) 373-0502

Website: http://www.deq.state.id.us

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper, mlharper@idahoruralwater.com, Idaho Rural Water Association, at 208-343-7001 for assistance with drinking water protection (formerly wellhead protection) strategies.

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund≅ is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5 mg/L.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.

References Cited

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

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IDAPA 58.01.08, Idaho Rules for Public Drinking Water Systems, Section 004.

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Kaal, A.S.; 1978. Analysis of Hydrogeologic Factors for the Location of Water Wells in the Granitic Environment of Moscow Mountain, Latah County, Idaho. University of Idaho M.S. Thesis.

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Appendix A

Village 21 Water District

Susceptibility Analysis Worksheet

Formulas used to determine Susceptibility Analysis Final Scores

Formula for Well Sources

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 1.125)

Final Susceptibility Scoring:
0 - 5 Low Susceptibility
6 - 12 Moderate Susceptibility
$\geq$ 13 High Susceptibility

Ground Water Susceptibility Report   Public Water System Name : VILLAGE 21 WATER DIST   Well# : SOLBERG WELL
Public Water System Number 2250066   01/08/2003 12:18:37 PM

1. System Construction		SCORE
Drill Date	12/12/1970	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	YES	1996
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	NO	1
Casing and annular seal extend to low permeability unit	NO	2
Highest production 100 feet below static water level	NO	1
Well located outside the 100 year flood plain	YES	0
Total System Construction Score		5

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	NO	2
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	YES	0
Total Hydrologic Score		0

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	2	2	2	2
(Score = # Sources X 2) 8 Points Maximum		4	4	4	4
Sources of Class II or III leacheable contaminants or	YES	2	2	2	
4 Points Maximum		2	2	2	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		6	6	6	4
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		3	3	3	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		2	2	2	0
Cumulative Potential Contaminant / Land Use Score		11	11	11	4
4. Final Susceptibility Source Score		11	11	11	11
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate